

DYNKIN, Yevgeniy Borisovich; YUSHKEVICH, A.A., red.; BRUDNO, E.F.,
tekhn.red.

[Foundations of the theory of Markov processes] Osnovaniia
teorii markovskikh protsessov. Moskva, Gos.izd-vo fiziko-matem.
lit-ry, 1959. 227 p. (MIRA 12:11)
(Probabilities)

32515

16.6100 (2403)

S/044/61/000/011/038/049
C111/C444

AUTHOR: Yushkevich, A. A.

TITLE: On the differentiability of the transition probabilities of a homogeneous Markov process with denumerable number of states

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 6, abstract 11V24. (Uch. zap. MGU, 1959, vyp. 186, 141-159)

TEXT: It is proved that homogeneous Markov processes with countable number of states are strictly of the Markov kind. This property is used in order to prove that the transition probabilities $p_{ik}(t)$ for $t > 0$ possess finite derivatives, if one of the limits

$$\lim_{t \rightarrow 0} \frac{1-p_{ii}(t)}{t}, \quad \lim_{t \rightarrow 0} \frac{1-p_{kk}(t)}{t}$$

is finite. If both of the limits are finite, then $p_{ik}(t)$ is absolutely continuous. An example is constructed, where $p_{ik}(t)$ possesses an infinite second derivative.

[Abstracter's note: Complete translation.]

Card 1/1

DEMIDOVICH, Boris Pavlovich; MARON, Isaak Abramovich; SMOLITSKIY, Kh.L.,
prof., retsenzent; FROLOV, S.V., dotsent, retsenzent; SHOSTAK, R.Ya.,
retsenzent; YUSEKIVICH, A.A., retsenzent; BIRYUK, G.I., red.;
AKHILAMOV, S.N., tekhn.red.

[Principles of computer mathematics]. Osnovy vychislitel'noi mate-
matiki. Pod obshchey red. B.P.Demidovicha. Moskva, Gosizd-vo
fiziko-matem.lit-ry, 1960. 659 p. (MIRA 14:4)
(Mathematics)

YUSHKEVICH, A.A. (Moscow)

Definition of a strong Markov process. Teor. veroiat. i ee prim.
5 no.2:237-243 '60. (MIRA 13:9)
(Probabilities)

DYNKIN, Yevgeniy Borisovich; YUSHKEVICH, A.A., red.; BRUDNI, K.F.,
tekhn. red.

[Markov processes] Markovskie protsessy. Moskva, Fiz-
matgiz, 1963. 859 p. (MIRA 16:5)
(Markov processes)

KRYLOV, N.V.; YUSHKEVICH, A.A. (Moscow)

Markov random sets. Teor. veroiat. i ee prim. 9 no.4:738-

743 '64.

(MIRA 17:12)

ERYLON, M. S. YODHREYICH, A.A.

Markov sets. Trudy Mosk. mat. ob-va 13:114-135 '65.
(MIRA 18:9)

MURHINA, L.M.; YUSHKEVICH, A.I.

Experience in teaching mathematics in speeded up instruction groups.

Ish. zap. Pskov.gos.ped.inst. no.21:47-48 '64.

(MIRA 18:16)

YUSHKEVICH, A. P.

Idei obosnoraniya matematicheskogo analiza v XVIII veke. V kh. Lazar' Karno (Razmyshleniya o metafizike ischisleniya beskonечно malykh). M. - L., GTTI (1935), 11-76.

SO: Mathematics in the USSR, 1917-1947

edited by Kurosh, A.G.,

Markuzhevich, A.I.,

Rashevskiy, P.K.

Moscow-Leningrad, 1948

YUSHKEVICH, A. P.

Matematika i yeye prepodavaniye v rossii v XVII - XIX - vv. zh. Matem. v shkole, 1-6 (1947).

SO: Mathematics in the USSR, 1917-1947

edited by Kurosh, A.G.,

Markushevich, A.I.,

Rashevskiy, P.K.

Moscow-Leningrad, 1948

Y. L. DEVICH, A.P.

Yakovlev, A. P. Academician of the USSR Academy of Sciences and his role
in the development of Russian aviation. Akad. Nauk
SSSR. Trudy Inst. Ist. Voen. i Vozd. Flota, 1947, No. 1-2
(1947) (4 pages)

Source: National Archives

Vol. 12 No. 5

Y. ... P.
On the origin of ...
its ...
S. ... 1. ... 4. ...
...

YUSKEVICH, A.P.

Yuskevich, A.P. "Mathematics in Moscow University during the first hundred years of its existence", Ist.-matem. issledovaniya, Issue 1, Moscow, 1948, p. 43-140

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

Yusuf A. P. Omar Khayyam and his "Algebra." Akad.
Nauk SSSR Trudy Inst. Ist. Istor. Estestvoznaniya 2, 499-
534 (1948) (Russian)

Source: Mathematical Reviews, 1950/4, Vol. 11, No. 3

Y. L. SHATILICH, A. P.

Y. L. SHATILICH, A. P. On the first Russian edition of the work
Euclid and Archimedes. (Leningrad: Nauka, 1984). 1 copy in
Library of Congress. 2 (1984). 1-4 (Russian).

Since the publication of reviews. 1984. 1-4 (Russian).

YUSHKEVICH, A. P.

37165. YUSHKEVICH, A. P.; i BASHMAKOVA. I. G. "Algebra ili Vychislenie Kohechnykh"
No I. Lobachevskogo. V. sb: Ist-matem. Issledovaniya. Vyp, 2 M-L, 1949
s. 72-128

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949.

YUSEKEVICH, A. P.

Yusekevich, A. P. - "Mathematics and its teaching in Russian from the XVIIth through the XIXth centuries. Russian mathematics at the end of the XVIIIth and the beginning of the XIXth centuries", Matematika v shkole, 1949, No. 3, p. 1-14, (Conclusion; beginning: No. 1, 1947).

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

Yudin, A. P.

2000

Yudin, A. P. Euler and Russian mathematics in the
XVIIIth century. Akad. Nauk SSSR, Trudy Inst. Istorii
Matematicheskikh Nauk, 3, 45-116 (1944). (Russian)

8/11/50

Source: Mathematical Reviews, 1950 Vol. 1 No. 8

YUSHKEVICH, A. P.

Yushkevich, A. P. - "Certain problems of lecturing on mathematics in technical colleges",
Vestnik vyssh. shkoly, 1949, No. 4, p. 10-12.

SO: U-411, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949).

YUSHEVICH, A.P.

BAKHMUTSKAYA, E.Ya. (Khar'kov); PRUDNIKOV, V.Ye. (Moscow); ROSSINSKIY, S.D. (Moscow); DEPMAN, I.Ya. (Leningrad); SHOSTAK, R.Ya. (Moscow); FIKHTENGOL'TS, G.W. (Leningrad); SPASSEIY, I.G. (Leningrad); GUSISOV, V.V. (Vladivostok); RYBKIN, G.F., redaktor; YUSHEVICH, A.P., redaktor.

[Historical studies in mathematics. Vol. 5] Istoriko-matematicheskie issledovaniia. Moskva, Gos. izd-vo tekhniko-teoreticheskoi lit-ry, 1952. 472 p. Vol. 5. (MLRA 6:5)

1. Moscow. Universitet. Seminar po istorii matematiki. (Mathematics) (Osipovskii, Timofei Fedorovich, 1765-1832) (Peterson, Karl Mikhailovich, 1828-1881) (Letnikov, Aleksei Vasil'evich, 1837-1888)

DESCARTES, René, 1596-1650 [author]; SLYUSAREV, G.G., perevodchik i kommentator;
YUSHKEVICH, A.P., perevodchik i kommentator.

[Discourse on Method with his Dioptrics, Meteors and Geometry] Rassuzhdeniye
o metode o prilozheniyami dioptrika, meteory, geometriia. Red., perevod,
stat'i i kommentarii G.G.Slyusareva i A.P.Yushkevicha. [Leningrad] Izd-vo
Akademii nauk SSSR, 1953. 656 p.
(MLRA 6:7)
(Science--Methodology)

YUSHKEVICH A.P.

RYBKIN, G.F., redaktor; YUSHKEVICH, A.P., redaktor; BITTUTSKOV, V.I.,
redaktor; TUMARKINA, N.A., tekhnicheskii redaktor

[Studies on the history of mathematics] Istoriko-matematicheskie
issledovaniia. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry.
Vol. 6. 1953. 671 p. (MLRA 7:10)
(Mathematics--History)

-YUSHKEVICH, A.P.

1-2/77

1. The first part of the document is a translation of the text of the letter from the Ministry of the Interior of the Soviet Union to the Ministry of the Interior of the United States, dated 1941. The letter is signed by the Minister of the Interior of the Soviet Union, Nikolai I. Zhukov.

[illegible]

1. The first part of the report is a general introduction to the project, which includes a brief history of the project and a statement of the project's purpose.

based on a presumably unique manuscript. How
ever, a new discovery in the library of the Saphsar Mosque
at Tiberias was utilized by the author in the second (Math. 3,
1-10 (1953)) who noted that the manuscript of (2) is an ac-
count to prove the positive definiteness and that it was
known and established well before the study of the
"characteristic" properties of the real and hard parts
of (2). Also stated by David Hilbert of Berlin,
1900, MR 14, 1914, were a criticism of the "circular defini-
tion of pi" and a proposition of an alternative theory in
defense both in terms of sequences and by application
of the "epsilon-delta" argument. There is a welcome addition
to the "epsilon-delta" and "epsilon-delta" in the "epsilon-delta"
theory of the "epsilon-delta" in the "epsilon-delta" (Beirut).

YUSHKEVICH, A. P.

Jan/Feb 53

USSR/Mathematics - Societies

"Five Weekly Sessions (23 Sep - 21 Oct 52) of the Moscow Mathematical Society"

Usp Mat Nauk, Vol 8, No 1(53), pp 173-176

P. S. Aleksandrov, pres of the Society, urged members to assist in problems announced at the 19th Party Congress. The following reports were made: K. A. Sitnikov "Possibility of Capture in the Three-body Problem." S. L. Sobolev, "A Difference Equation." A. N. Kolmogorov, "Spectra of Dynamic Systems on a Torus." A. V. Bitsadze, "The Mixed-type Equation $u_{xx} + \text{sgn } u_{yy} = 0$ of M. A. Lavrent'ev." L. N. Sretenskiy, "The Motion of the Goryachev-Chaplygin Gyroscope." I. N. Vekua, "Systems of Elliptic Equations." V. V. Nemytskiy, "Structure of the Spectrum of Nonlinear Operator Equations." A. P. Yushkevich, "Mathematics of Central Asian Peoples in the 9-15th Centuries." L. S. Sretenskiy vice pres of the Society suggested felicitations for member S. S. Byushgensson his 70th birthday.

PA 250T75

YUSHKEVICH A.P.

Muhammad ibn Musa al-Khwarazmi's treatise on arithmetic.
Trudy Inst. ist. est. i tekhn. no.1:85-127 '54. (MIRA 8:9)
(Arithmetic--History) (Algorism)

✓ The mathematical treatises of Djemsid Giyaseddin Kashi
 Istoriya Matematiki 7, 9-379 (1954). (Russian)

1 - P/W

112) Yuskevich, A. P. and Rozenfeld, B. A. Commentary on
the mathematical treatises of Djemsid Giyaseddin
Kashi. Istoriya Matematiki 7, 301-449 (1954) (Russian)

These two works together comprise a translation into Russian and a commentary on two books written by Jamshid ben Ibrahim al-Kashi or al-Kashi (fl. 1420) who worked in Iran and Turkistan. The publication does not give the Arabic text, but includes numerous examples of numerous

problems. The first book, "The key to arithmetic," a work on the decimal system, is divided by "key" in two parts. The first part, pp. 120, 217, 274 (1954). The second part, pp. 120, 217, 274 (1954). Deutsche Monographien, No. 11. Stuttgart, Westermann, 1951.

Thus the main interest of the Russian translation is in the decimal system, not deal with by Luckey. The second part, a number of decimal fractions are freely chosen. The decimal fractions include the decimal fractions, regular and semi-regular polygons, solids, regular and semi-regular polygons, and area computations for

(2)

4/2/82
B.A.
Various other... operations
with... of phantoms and
infiltration missions.

The page 17 of the... printed upside down
may prove confusing to reader not familiar with the
Vietnam language materials.

...including one in the
...the trans-
...No mention is
...1989

...the... the... the... on the
...in approximation
...editor of this
...has recently been
...Berlin K. Math.
...E. S. Kennedy.

2/2

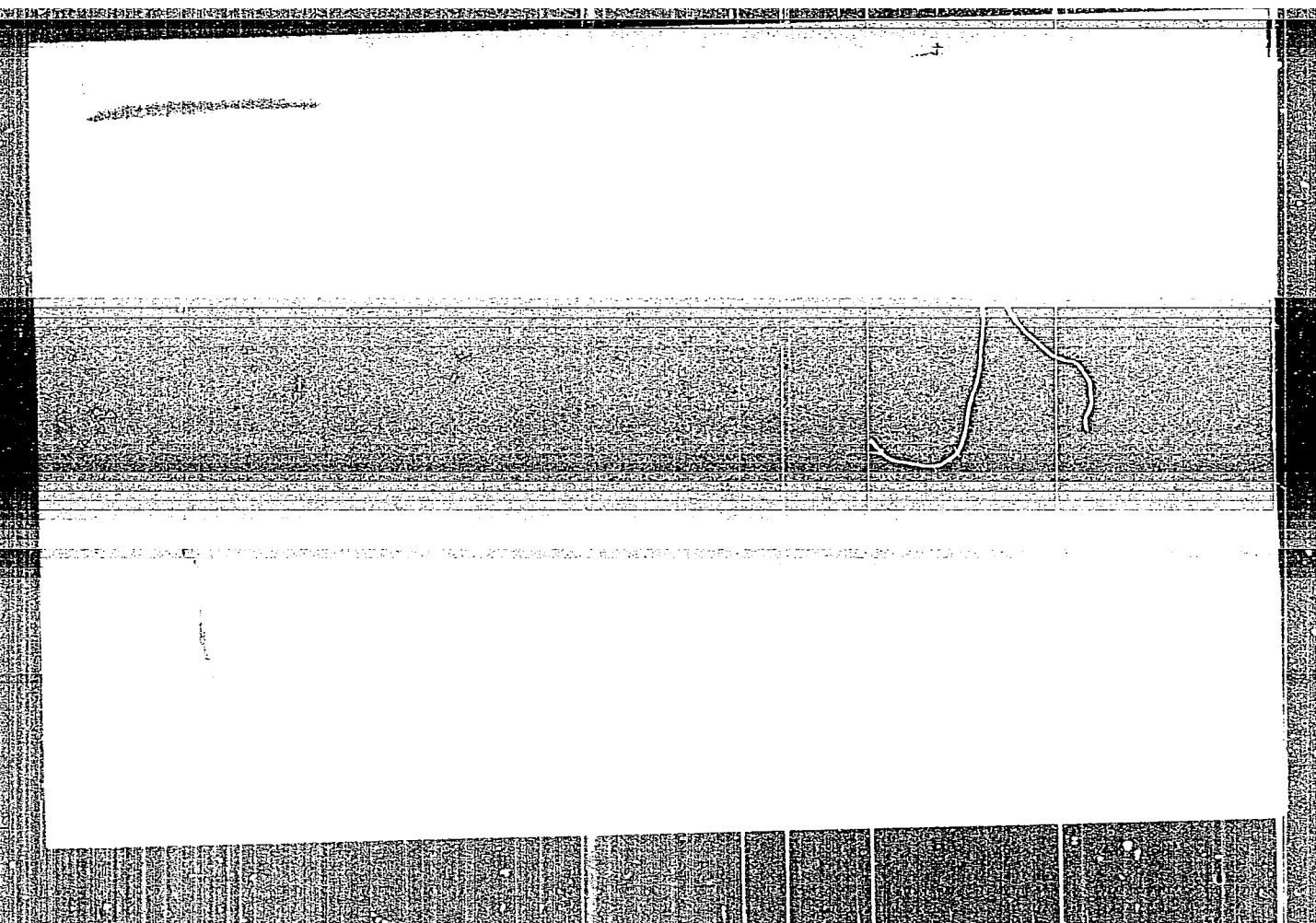
STW
RW

BASHMAKOVA, I.G. (Moscow); YUSHEEVICH, A.P. (Moscow)

Leonard Euler. Ist.-mat. issl. no. 7: 453-512 '54. (MLRA 8:6)
(Euler, Leonard, 1707-1783)

"APPROVED FOR RELEASE: 09/19/2001

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APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963230006-1"

YUSHKEVICH, A.P. (reviewer)

"Mikhail Vasil'evich Ostrogradskii." B.V.Gnedenko. Reviewed by
A.P.Iushkevich. Usp.mat.nauk 9 no.1:155-158 Ja-F '54. (MLRA 7:2)

(Ostrogradskii, Mikhail Vasil'evich, 1801-1861)
(Gnedenko, Boris Vladimirovich, 1912-)

YUSHKEVICH, A.P.
ROGACHENKO, V.F.

"Research in the history of mathematics." G.F.Rybkin, A.P.Iushkevich.
Reviewed by V.F.Rogachenko. Usp.mat.nauk 9 no.3:267-273 '54.(MLRA 7:10)
(Mathematics) (Rybkin, G.F.) (Iushkevich, A.P.)

YUSHKOVICH, A.
KUZNETSOV, I.V., redaktor; GOLUBTSOVA, V.A., redaktor; GRIGOR'YAN, A.T., redaktor; ZUBOV, V.P., redaktor; SOTIN, B.S., redaktor; FIGUROVSKIY, N.A., redaktor; SHUKHARDIN, S.V., redaktor; YUSEKEVICH, A.P., redaktor; DOBRONRAVOVA, A.O., redaktor; ~~ALEXSEIEVA, T.V.~~, tekhnicheskiy redaktor.

[History of the science and technology of China; a collection of articles] Iz istorii nauki i tekhniki Kitaa; sbornik; statei, Moskva, Izd-vo Akademii nauk SSSR, 1955, 181 p.
(MLRA 8:10)

1. Akademiya nauk SSSR. Institut istorii yestestvoznaniya i tekhniki.

(China--Science--History) (China--Technology--History)

YUSHEVICH, A. P.

★ Yuškevič, A. P. On attainments of Chinese scholars in the field of mathematics. Iz istorii nauki i tehniki Kitaya (From the history of science and engineering in China), pp. 139-159. Izdat. Akad. Nauk SSSR, Moscow, 1955. 7.75 rubles.
Essentially the same as a paper by the author in Istori.
Mat. Issled. 8 (1955), 539-572; MR 17, 1.

Math
Educ

YUSHKEVICH, A. F.

ANDRONOV, I.K., prof.; VYGODSKIY, M.Ya., prof.; DEPMAN, I.Ya., prof.;
MOLODISHIY, V.N., dots.; YUSHKEVICH, A.P., prof.; SMIRNOVA, M.I.,
tekhn. red.

[Programs of pedagogical institutes; history of elementary mathematics for mathematical sections of physics and mathematics faculties] Programmy pedagogicheskikh institutov; istoriya elementarnoi matematiki dlia matematicheskikh otdeleniy fiziko-matematicheskikh fakul'tetov. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1956. 12 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i srednikh pedagogicheskikh uchebnykh zavedeniy.
(Mathematics--Study and teaching)

YUSHKEVICH, A.P.

AL-KASHI, Dzhenzid Ghiyaseddin [Al-Kāshī, Jamshīd Ben Mas'ūd]; ROZENFEL'D, B.A. [translator]; SEGAL', V.S., redaktor; ~~YUSHKEVICH, A.P., redaktor~~; RAZUMOVSKAYA, A.P., redaktor; MURASHOVA, N.Ya., tekhnicheskii redaktor

[Key to arithmetic. Treatise on the circumference. With a supplement containing the Arabic manuscripts of both treatises, Translated from the Arabic] Kliuch arifmetiki. Traktat ob okruzhnosti. Perevod s arabskogo B.A.Rozenfel'da. Red. V.S.Segalia i A.P.Yushkevicha. Kommentarii A.P.Yushkevicha i B.A.Rozenfel'da. S prilozheniem reproduktsei arabskikh rukopisei oboikh traktatov. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 566 p. (MIRA 10:7)
(Geometry, Plane)

YUSHKEVICH, A.P.

A new book on Gauss ("Karl Friedrich Gauss." Erich Worbs.
Reviewed by A.P. Iushkevich). Vop. 1st. est. 1 tekhn. no. 1:
299-301 '56. (MLRA 9:10)

(Gauss, Karl Friedrich, 1777-1855) (Worbs, Erich)

YUSHKEVICH, A.P.

Medieval German manuscript on arithmetic. Vop. 1st. est. 1 tekhn.
no. 2: 290-291 '56. (MIRA 10:1)
(Regensburg, Germany--Arithmetic--Before 1846)

YUSHKEVICH, A. P.

YUSHKEVICH, A.P.

Leonard Euler's life and his works in mathematics. Usp.mat.nauk
12 no.4:3-28 J1-Ag '57. (MIRA 10:10)

(Euler, Leonhard, 1707-1783)

~~YUSHKEVICH, A.P.~~

S.I. Vavilov as a student of I. Newton's work. Trudy Inst.ist.
est.1 tekhn. 17:66-89 '57. (MIRA 10:7)
(Vavilov, Sergei Ivanovich, 1891-1951)
(Newton, Isaac, 1642-1727)

~~KUSHKEVICH, A.P.~~, doktor fiziko-matematicheskikh nauk; ~~MANDRYKA, A.P.~~,
kandidat tekhnicheskikh nauk.

The 250th anniversary of L. Euler's birth. (Solemn sessions
in Berlin and Leningrad). Vest. AN SSSR 27 no.6:121-123 Ja '57.
(Euler, Leonhard, 1707-1783)

YUSHKEVICH, A.P.

Celebration of Euler's jubilee in the U.S.S.R. and German
Democratic Republic. Usp.mat.nauk 12 no.4:223-225 J1-Ag '57.
(MIRA 10:10)

(Euler, Leonhard, 1707-1783)

YUSHKEVICH, A.P.

YUSHKEVICH, A.P.

"Johann Bolyai; life and works of a great mathematician" [in German]
by Imre Toth. Reviewed by A.P. Iushkevich. Vop. 1st. est. 1 tekhn.
no.3:230-231 '57. (MIRA 11:1)

(Bolyai, Johann, 1802-1860)
(Toth, Imre)

YUSHEVICH, A.P.
YUSHEVICH, A.P.

Leonhard Euler and the quadrature of the circle. Ist.-mat. issl. no.10:
159-210 '57. (MIRA 11:1)
(Euler, Leonhard, 1707-1783) (Circle-squaring)

Yushkevich, A.P.
YUSHKEVICH, A.P.

"Transactions of the Berlin Academy of Sciences, 1746-1766;
documents about Leonhard Euler's activity in Berlin" [in German] by
E. Vinter. Reviewed by A.P. Iushkevich. Vop.ist.est. 1 tekhn. no.5:204
'57. (MIRA 11:2)

(Euler, Leonhard, 1707-1783)
(Vinter, E.)

YUSHEVICH, A.P.

One problem of the number theory in the Russian mathematical
manuscripts of the 17th century. Trudy Inst.1st.est.1 tekhn.
17:300-311 '57. (Numbers, Theory of) (MLRA 10:7)

EYLER, Leonard [Euler, Leonhard]; LAVRENT'YEV, M.A., red.; YUSHKEVICH, A.P., red.; GRIGOR'YAN, A.T., red.; GESSEN, L.V., red. izd-va; POLENOVA, T.P., tekhn. red.

[Leonhard Euler; a collection of articles presented to the Academy of Sciences of the U.S.S.R. in honor of the 250th anniversary of his birth] Leonard Euler; sbornik statei v chest' 250-letia so dnia rozhdeniia, predstavlenykh Akademii nauk SSR, 1958. 606 p. (MIRA 12:4)

1. Predsedatel' Eylerovskogo yubileynogo komiteta Akademii nauk SSSR (for Lavrent'yev).
(Euler, Leonhard, 1707-1783)

YUSHKEVICH, A.P.

16(1)

PHASE I BOOK EXPLOITATION

SOV/1366

Istoriko-matematicheskiye issledovaniya, vyp. 11 (Research in Mathematical History, Nr 11) Moscow, Fizmatgiz, 1958. 792 p.
5,000 copies printed.

Eds. (Title page): Rybkin, G.F. and Yushkevich, A.P.; Ed. (Inside book): Konoplyankin, A.A.; Tech. Ed.: Murashova, N. Ya.

PURPOSE: This book is intended for mathematicians and others interested in the history of mathematics, and may serve as the basis for a suitable university text on the history of mathematics, thereby filling the most serious gap in Soviet mathematical literature.

COVERAGE: This book contains reports made by members of the section on the history of mathematics at the Third All-Union Mathematical Congress which discussed problems of the history of mathematics and various articles on the significance of the history of mathematics

Card 1/8

Research in Mathematical History (Cont.)

SOV/1366

for mathematics itself and for the other sciences. There are also four articles on the history of mathematics in Czechoslovakia and Rumania, an article on the investigation of the algebraic roots of differential calculus in connection with a study of the mathematical writings of K. Marx, and an article on the work done on negative numbers by the Arabian mathematician, Abu-l-Wafa. A series of articles on various texts and documents connected with the history of mathematics, including a translation of the treatise De Configuratione Qualitatum by N. Oresme and two articles concerning it, concludes the book.

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SOV/1366

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AVAILABLE: Library of Congress

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LK/mtl
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KUKARKIN, Boris Vasil'yevich, prof.; RYBNIKOV, Konstantin Alekseyevich, prof.; BASIMAKOVA, Inabella Grigor'yevna; YUSHKEVICH, Adol'f Pavlovich; YANOVSKAYA, Gal'ya Aleksandrovna; SPASSKIY, Boris Ivanovich, dotsent; MIKHAYLOV, Glib Konstantinovich, starshiy nauchnyy sotrudnik; MATYNOV, D.Ya., prof., otv.red.; GORDIYEV, D.I., prof., red.; IVANENKO, D.D., prof., red.; KUDRYAVTSEV, P.S., prof., red.; KULIKOVSKIY, P.G., dotsent, red.; KHRGIAN, A.Kh., prof., red.; SHEVTSOV, N.S., prof., red.; VERKHUNOV, V.M., assistant, red.; KONONKOV, A.F., red.; YERMAKOV, M.S., tekhn.red.

[Programs of courses on the history of the physicomathematical sciences] Programmy po istorii fiziko-matematicheskikh nauk. (MIRA 12:12)
Moskva, 1959. 40 p.

1. Moscow. Universitet. 2. Orgkomitet Vsesoyuznoy mezvuzovskoy konferentsii po istorii fiziko-matematicheskikh nauk (for Kukarkin, Rybnikov, Spasskiy, Gordeyev, Ivanenko, Kudryavtsev, Kulikovskiy, Mikhaylov, Khrgian, Shevtsov, Verkhunov, Kononkov).

(Physics--Study and teaching)

(Mathematics--Study and teaching)

16(0) PHASE I BOOK EXPLOITATION SOV/3177

Matematika v SSSR za sorok let. 1917-1957 tom 1. Obzornye stat'i (Mathematics in the USSR for Forty Years, 1917-1957) Vol. 1. Review Articles) Moscow, Fizmatgiz, 1959. 1002 p. 5,500 copies printed.

Eds: A. G. Kurosh, (Chief Ed.), V. I. Bitutakov, V. O. Eshyanaky, Ye. P. Pynkin, O. Ye. Salova, and A. P. Yushkevich; Ed. (inside book): A. P. Lapsa; Tech. Ed.: S. N. Akhlanov.

REMARKS: This book is intended for mathematicians and historians of mathematics interested in Soviet contributions to the field.

COVERAGE: This book is Volume I of a major 2-volume work on the history of Soviet mathematics. Volume I during the chief contributions made by Soviet mathematicians during the period 1917-1957. Volume II will contain a bibliography of major works since 1917 and biographic sketches of some of the leading mathematicians. This work fits the tradition set by two earlier works: Matematika v SSSR za pyatnadtsat let (Mathematics in the USSR for 15 Years) and Matematika v SSSR za tridtsat let (Mathematics in the USSR for 30 Years). The book is divided into the major divisions of the field, i.e., algebra, topology, theory of probability, functional analysis, etc., and contains a list of outstanding problems in each discussed. A listing of about 1000 Soviet mathematicians is included with references to their contributions in the field.

LYAPUNOV, A. A. Mathematical Studies Connected With the

Use of Computers

1. Theoretical studies in programming
2. Nonarithmetical use of computers
3. Theoretical studies of control systems
4. Certain other problems of mathematical cybernetics

Shura-Bura, M. R. Programming

Katkov, S. V. Homography

Chetverukhin, N. P. Descriptive Geometry and its Generali-

1. Fundamental Theorems of axonometry and its generalization
2. Multidimensional descriptive geometry
3. Parametric method of studying images. Positional and metric completeness
4. Other problems

Vasil'ev, A. M., Borden, A. P., and Pinkov, S. P.

Differential Geometry

1. Problems of classical differential geometry and their generalizations
2. The general theory of surfaces
3. Theory of data
4. Complex spaces
5. Theory of geometric objects

Yachim, K. V. Geometry "in the Large"

1. Geometry on a convex surface of convex surfaces
2. Single valued determination of surfaces with regular metric
3. Regularity of convex surfaces. Polyhedra
4. General theory of areas and regularity of surfaces
5. Existence, uniqueness and regularity of Gaussian curvature under given conditions
6. General linear boundary value problems of the theory of surfaces given a function of the principal curvatures
7. Arithmetic invariants. Theorems on local deformations
8. Infinitesimal bendings
9. Certain results on synthetic geometry

Yushkevich, A. P. The History of Mathematics

1. Introduction
2. Mathematics of the Ancient East
3. Mathematics of ancient Greece
4. Mathematics in the Middle Ages
5. Works of modern mathematicians
6. Works on the history of various disciplines and problems, works of a general nature

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OSTROGRADSKIY, Mikhail Vasil'yevich [deceased]; SHTOKALO, I.Z., akademik, otv. red.; BOGOLYUBOV, N.N., akademik, otv. red. toma; GNEDENKO, B.V., akademik, red.; ISHLINSKIY, A.Yu., akademik, red.; RAMEZ, Ye.Ya., red.; SAVIN, G.N., akademik, red.; SOKOLOV, Yu.D., red.; SMIRNOV, V.I., akademik, red.; YUSHEVICH, A.P., prof., red.; POGREBYSSKIY, I.B., dotsent, red.; SHTREL'IK, V.G., red. izd-va; RAKHLINA, N.P., tekhn. red.

[Collected works in three volumes] Polnoe sobranie trudov v trekh tomakh. Kiev, Izd-vo Akad. nauk USSR. Vol. 1. 1959. 310 p. (MIRA 12:8)

1. AN USSR (for Shtokalo, Gnedenko, Ishlinskiy, Savin). 2. Chlen-korrespondent AN USSR (for Ramez, Sokolov). (Science)

YUSHKEVICH, A.P.; ROZENFEL'D, B.A.

Mathematics in Oriental countries during the Middle Ages. Iz ist.
nauki i tekhn. v stran. Vest. no.1:349-421 '60. (MIRA 14:8)
(East--Mathematics)

ROZENFELD, D.A.; YUSHKEVICH, A.P.

Remarks on Kasi-sade al-Rumi's treatise. Ist.-mat. issl. no.13:552-
556 '60. (MIRA 14:8)

(Circle)

ROZENFEL'D, B.A.; YUSHKEVICH, A.P.

Comments on Kasi-sade al-Rumi's treatise on the determination
of the sine of one degree of arc. Ist.-mat. issl. no.13:533-
538 '60. (MIRA 14:8)

(Circle)

YUSHKEVICH, A.P.; VINTER, E.

Leonhard Euler's correspondence with the Academy of Sciences in St.
Petersburg from 1741 to 1757. Trudy Inst. ist. est. 1 tek. 34:428-
491 '60. (MIRA 14:2)

(Euler, Leonhard, 1707-1783)

KOL'MAN, E.; YUSHKEVICH, Adol'f Pavlovich; ROZENFEL'D, B.A., otv.
red.; UGAROVA, N.A., red.; POLOVINKIN, S.M., red.;
AKHLAMOV, S.N., tekhn.red.

[Mathematics before the Renaissance] Matematika do epokhi Voz-
rozhdeniia. Moskva, Gos. izd-vo fiziko-matem. lit-ry.
Book 2. [History of mathematics in the Middle Ages] Istoriia
matematiki v Srednie veka. 1961. 448 p. (MIRA 15:3)
(Mathematics)

OSTROGRADSKIY, Mikhail Vasil'yevich, matematik, mekhanik; SHTOKALO, I.Z., akademik, otv. red.; GNEDENKO, B.V., akademik, zam. otv. red.; ISHLINSKIY, A.Yu., akademik, zam. otv. red.; BOGOLYUBOV, N.N., akademik, red.; REMEZ, Ye.Ya., red.; SAVIN, G.N., akademik, red.; SOKOLOV, Yu.D., red.; SMIRNOV, V.I., akademik, red.; YUSHKEVICH, A.P., prof., red.; POGREBYSSKIY, I.B., dotsent, red.; SHTELIK, V.G., red. izd-va; RAKHLINA, N.P., tekhn. red.

[Complete works in three volumes] Polnoe sobranie trudov v trekh tomakh. Kiev, Izd-vo Akad. nauk USSR. Vol.2. 1961. 358 p.
(MIRA 14:11)

1. AN USSR (for Shtokalo, Gnedenko, Ishlinskiy). 2. Chlen-korrespondent AN USSR (for Remez, Sokolov).
(Mechanics, Analytic)

OSTROGRADSKIY, Mikhail Vasil'yevich [deceased]; SHTOKALO, I.Z., akademik,
otv.red.; GNEDENKO, B.V., akademik, otv.red.toma; ISHLINSKIY,
A.Yu., akademik, zamestitel' otv.red.; BOGOLYUBOV, M.N., akademik,
red.; REMEZ, Ye.Ye., otv.red.toma; SAVIN, G.N., akademik, red.;
SOKOLOV, Yu.D., red.; SMIRNOV, V.I., akademik, red.; YUSHEVICH,
A.P., prof., red.; FOGREBYSSKIY, I.B., dotsent, red.; SHTELIK,
V.G., red.izd-va; RAKHLINA, N.P., tekhn.red.

[Complete collection of works in three volumes] Polnoe sobranie
trudov v trekh tomakh. Kiev, Izd-vo Akad.nauk USSR. Vol.3. 1961.
395 p. (MIRA 15:2)

1. AN USSR (for Shtokalo, Gnedenko, Savin). 2. Chleny-korrespondenty
AN USSR (for Remez, Sokolov).
(Mathematics)
(Ostrogradskii, Mikhail Vasil'evich, 1801-1861)

BOGOLYUBOV, N.N., red.; GNEDENKO, B.V., red.; POGREBYSSKIY, I.B., red.;
REMEZ, Ye.Ya., red.; SMIRNOV, V.I., red.; SOKOLOV, Yu.D., red.;
SHTOKALO, I.Z., red.; YUSHKEVICH, A.P., red.; SHIROKOVA, S.A., red.;
YERMAKOVA, Ye.A., tekhn. red.

[Pedagogical heritage and documents on the life and work of Mikhail Vasil'evich Ostrogradskii (1.1.1862 - 1.1.1962)] Mikhail Vasil'evich Ostrogradskii, 1 ianvaria 1862 - 1 ianvaria 1962; pedagogicheskoe nasledie, dokumenty o zhizni i delatel'nosti. Pod red. I.B. Pogrebyaskogo i A.P. Iushkevicha. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1961. 397 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Institut matematiki.
(Ostrogradskii, Mikhail Vasil'evich, 1801-1861)

KOL'MAN, Ernest; YUSHKEVICH, A.P.; ROZENFEL'D, B.A., otv. red.;
UGAROVA, N.A., red.; KOPILOVA, A.N., red.; BRUDNO, K.F.,
tekhn. red.

[Mathematics before the Renaissance] Matematika do epokhi Vas-
rozhdeniia. Moskva, Gos.izd-vo fiziko-matem. lit-ry. Book 1.
[History of mathematics in antiquity] Istoriia matematiki v drev-
nosti. 1961. 235 p. (MIRA 15:2)
(Mathematics, Ancient)

ROZENFEL'D, B.A.; YUSHKEVICH, A.P.

Some problems in the history of science discussed at the 25th
International Congress of Oriental Studies. Vop.1st.est. 1 tskh.
no.11:179-180 '61. (MIRA 14:11)

(Oriental studies)
(Science)

ROSENFEL'D, B.A.; YUSHKEVICH, A.P.

Proofs of Euclid's Fifth Postulate in work by Thābit ibn
Qurrah al-Harrānī and Shams al-Din al-Samarqandī. Ist. mat.
1881. no.14:587-592 '61. (MIRA 16:10)

(Euclid's elements)
(Thābit ibn Qurrah al-Harrānī, 830-901)
(Al-Samarqandī, Shams al-Din Muhammad ibn Ashraf, fl.1291)

KOPELEVICH, Yu.Kh.; KRUTIKOVA, M.V.; MIKHAYLOV, G.K.; RASKIN, N.M.;
KNYAZEV, G.A., red.; SMIRNOV, V.I.; YUSHKEVICH, A.P.; TRAVIN,
N.V., red. izd-va; BOCHEVER, V.T., tekhn.red.

[Manuscripts of L.Euler's works in the archives of the
Academy of Sciences of the U.S.S.R.] Rukopisnye materialy
L.Eilera v arkhive Akademii nauk SSSR. Moskva, Izd-vo Akad.
nauk SSSR. Vol.1. [Scientific description] Nauchnoe opisaniye.
1962. 427 p. (Akademia nauk SSSR. Arkhiv. Trudy, no.17).
(MIRA 15:4)

(Euler, Leonhard, 1707-1783)

YUSHKEVICH, A.P.

"The exact sciences in antiquity" by O. Neubegauer. Vop. ist. est. i
tekh. no. 12:207-210 '62. (MIRA 15:4)
(Science, Ancient).
(Neubegauer, O.)

YUSHKEVICH, A.P.

"Pre-Greek mathematics" by Kurt Vogel. Reviewed by A. P.
Iushkevich. Vop.ist.est.i tekhn. no.12:210-212 '62. (MIRA 15:4)
(Mathematics, Ancient) (Vogel, Kurt)

YUSHKEVICH, A.P.

"History of mathematics" by J.E.Hofmann. Reviewed by A. P.
Iushkevich. Vop.ist.est.i tekhn. no.12:212-213 '62. (MIRA 15:4)
(Mathematics) (Hofmann, J. E.)

YUSHKEVICH, A.P.

"Elements of the history of mathematics" by Nicolas Bourbaki.
Reviewed by A.P. Iushkevich. Vop. ist. est. i tekhn. no. 12: 213-215
'62. (MIRA 15:4)
(Mathematics) (Bourbaki, Nicolas)

YUSHKEVICH, A. P.

"Presentations of mathematicians at the elections to the Berlin
Academy of Sciences" by Kurt-R. Biermann. Reviewed by A. P.
Iushkevich. Vop.ist.est.i tekhn. no.12:216-218 '62. (MIRA 15:4)
(Mathematicians) (Biermann, Kurt-R.)

GRIGOR'YAN, A.T.; YUSHKEVICH, A.P.

International symposium on the history of science in Oxford.
Vop.ist.est.i tskh. no.12:242-243 '62. (MIRA 15:4)
(Science--Congresses)

ZUBOV, V.P.; YUSHKEVICH, A.P.

"Some problems in Euclidean geometry" by N. Oresme. Reviewed by
V.P. Zubov, A.P. IUskevich. Vop. 1st. est. 1 tekhn. no.13:160-
162 '62. (MIRA 16:5)

(Geometry)

(Oresme, N.)

MEDVEDEV, Fedor Andreyevich; YUSHKEVICH, A.P., doktor fiziko-
matem. nauk, otv. red.

[Development of the theory of sets in the 19th century]
Razvitie teorii mnozhestv v XIX veke. Moskva, Nauka, 1965.
231 p. (MIRA 18:8)

GRIGOR'YAN, A.T., doktor fiz.-matem.nauk; YUSHKEVICH, A.P., doktor fiz.-matem.
nauk; POGREBYSSKIY, I.V., doktor fiz.-matem.nauk

At the international congress of the historians of science in
Warsaw. Vest. AN SSSR 35 no.12:67-71 D '65.

(MIRA 19:1)

YUSHKEVICH, A.V.

NEVOLIN, F.V., kandidat tekhnicheskikh nauk; MAKHINYA, V.M.; YUSHKEVICH, A.V.

Characteristics of solutions of alkyl benzenesulfonates and soap mixtures. Masl.-zhir.prom.23 no.1:27-30 '57. (MLRA 10:1)


1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Washing powders) (Sulfonates) (Soap)

Dependence of surface-active and detergent properties of
alkylsulfonates on the length and structure of the
alkyl chain. P. V. Novikov, G. A. Ki-1-Orkina, and A. V.
Yoshkevich. *ISSUES/PROBLEMS* 23; No. 7, 83-4
(1981). A polymer from petroleum gas was distilled into
the following fractions: I, 100-20° (octylene fraction), II,
120-50° (nonylene fraction), III, 100-120°, IV, 120-144°
(dihexamylene fraction), V, 120-140° (dihexamylene frac-
tion), VI, tetrapropylene fraction (boiling range not given),
and VII "wide" and "narrow" fractions of tetramers and
pentamers. From these fractions were prepd. the benzene-
sulfonic acid Na salts. The sulfonate from VI in all cases
was a good depressant for the surface tension of water;

PETROV, A.D., NIKISHINA, G.I., kand. khim. nauk, NEVOLIN, F.V., kand. tekhn. nauk, KRAL'-OSIKINA, G.A., OREKHOVA, M.V., YUSHKEVICH, A.V.

Effect of the size and structure of the alkyl chain of alkyl derivatives of benzenesulfonic acid on their surface active and detergent properties. Masl.-zhir. prom. 24 no. 8:23-29 '58.
(MIRA 11:8)

1. Chlen-korrespondent AN SSSR (for Petrov).
2. AN SSSR (for Petrov, Nikishina).
3. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Nevolin, Kral'-Osokina, Orekhova, Yushkevich).
(Benzenesulfonic acid)
(Surface active agents)



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NEVOLIN, F.V., kand.tekhn.nauk; TIPISOVA, T.G.; YUSHKEVICH, A.V.

Effect of the composition of cleaning compounds on the quality
of washed laundry. Masl.-zhir.prom. 25 no.9:29-30 '59.
(MIRA 12:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Cleaning compounds--Testing)

YUSHKEVICH, E.S.

Processing of four photographs of August 1961 meteors. Izv. AN
Turk. SSR. Ser. fiz.-tekhn. i geol. nauk. no. 3:127 '62. (MIRA 16:5)

1. Fiziko-tekhnicheskiy institut AN Turkmenskoy SSR.
(Meteors—August)

ACCESSION NR: AP4046297

S/0203/64/004/005/0965/0968

AUTHOR: Gul'medov, Kh., Yushkevich, E.S.

TITLE: Structure and diffusion of meteor trails from photographic observations

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 5, 1964, 966-968

TOPIC TAGS: meteor, meteor trail, meteor trail diffusion, atmospheric turbulence, meteor trail structure

ABSTRACT: This paper presents the results of photometric measurements of the blackening density of successive photographs of stable meteor trails, observed on 21 October 1961 Astronomicheskaya observatoriya im. V.P. Engelgardta (V.P. Engel'gardt Astronomical Observatory) at Kazan'. Two trails were investigated. Partial results were previously published by the author (Geomagnetizm i aeronomiya, 1963, 3, No. 2, 309; Byull. VAGO, 1962, No. 32(39)). The photographs were taken with a camera with a "Yupiter-8" objective ($f = 1:2$, $F = 50$ mm). Seven or eight successive negatives were obtained for each trail. Measurements of the blackening density of the image of the trails were made using a MF-4 microphotometer with a magnification of 20. Information is given on the linear dimensions of the trails. It was found that the structure of the

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ACCESSION NR: AP4046297

trail in the second exposure was patchy, consisting of individual condensations. The largest condensations were formed at the beginning and end of the trail. The structure of the trail changed by the third exposure: the condensations in the middle part of the trail merged, only the large condensations at the beginning and end of the trail remaining. There was also a shifting of isophots from exposure to exposure. Figures 1 and 2 of the Enclosure show that with increasing height there is a change in both velocity and the coefficient of diffusion of the trails. These values correlate well with the variation in velocity of drift of the trails. There is an interrelationship between the structure of the trails and their rates of diffusion and drift; this can be attributed to the influence of atmospheric turbulence on the formation and development of trails. It is also shown that attenuation of the trail occurs not only as a result of diffusion, but also due to other phenomena which considerably accelerate this process. Brightness of the trail is also variable with height, as shown by Fig. 3 of the Enclosure. Orig. art. has: 3 formulas, 4 figures and 1 table.

ASSOCIATION: Otdel geofiziki i seysmologii, AN Turkmenskoy SSR (Division of Geophysics and Seismology, Academy of Sciences of the Turkmen SSR)

SUBMITTED: 18May64

ENCL: 03

SUB CODE: AA

NO REF SOV: 004

OTHER: 000

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ACCESSION NR: AP4046297

ENCLOSURE: 01

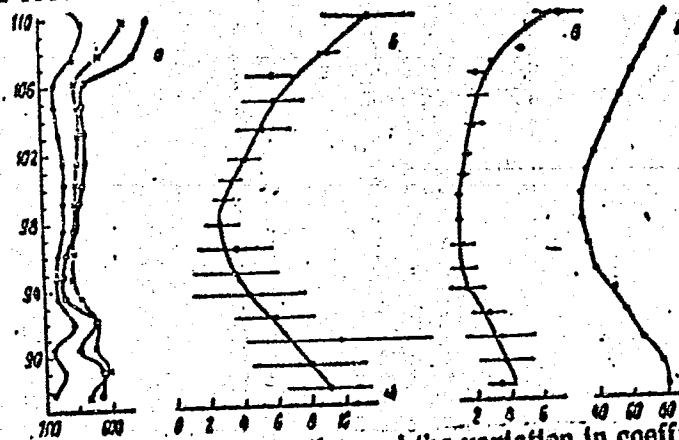


Fig. 1. Velocity profile of the meteor trails, and the variation in coefficient of diffusion with height.

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ACCESSION NR: AP4046297

ENCLOSURE: 02

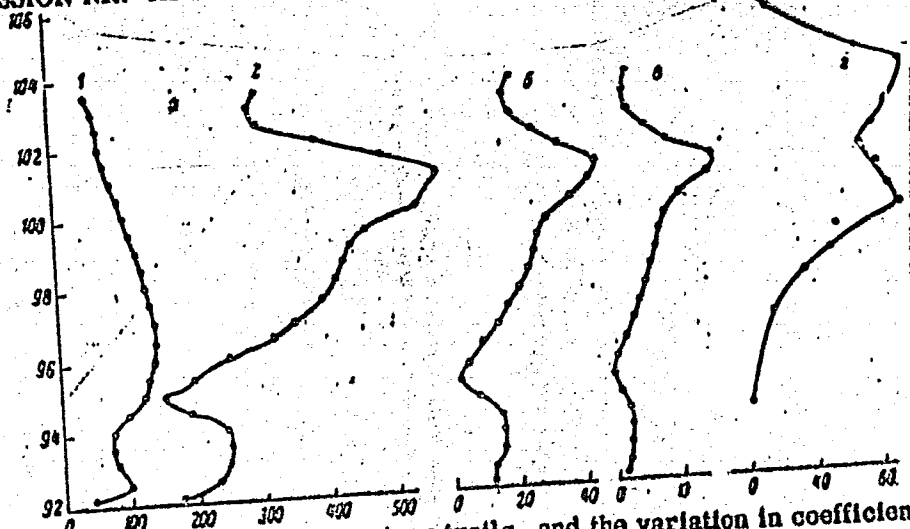


Fig. 2. Velocity profile of the meteor trails, and the variation in coefficient of diffusion with height.

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ACCESSION NR: AP4046297

ENCLOSURE: 93

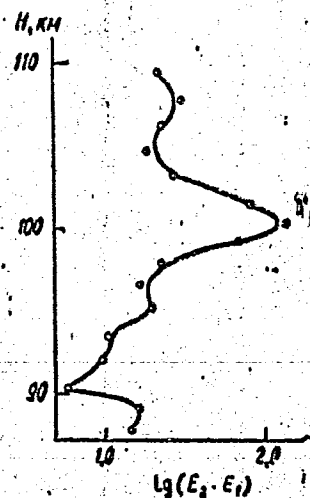


Fig. 3. Relationship between brightness of a meteor trail and height.

Card 5/6

GUL'MEDOVA, A.A.; SIMONENKO, A.N.; YUSHKEVICH, E.S.

Results of photographic observations of meteors. Izv. AN Turk.
SSR. Ser. fiz.-tekhn., khim. i geol.nauk no.3:131 '64 (MIRA 18:1)

1. Otdel geofiziki i seysmologii AN Turkmenskoy SSR, Astrofizicheskaya laboratoriya.

YUSHKEVICH, F.F.

CO

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Chemical composition of the Darassun mineral water. N. S. LOMONOSOVA AND
 Y. P. YUSHKEVICH. *Mém. Univ. Extrême-Orient* 4, 19 pp (sep. 1927); *Chem. Zentr.*
 1928, II, 5847. The dried residue from the Darassun spring water contains on an av.
 21.00% Ca, 7.92% Mg, 0.27% sulfate and 0.31% Cl. M. G. MOORE

430 S.E. METALLURGICAL LITERATURE CLASSIFICATION

YUSHKEVICH, G. F.

48-22-2-14/17

AUTHORS:

Dzhelepov, B. S., Kraft, O. Ye.,
Preobrazhenskiy, B. K., Yushkevich, G. F.

TITLE:

Positron Spectra of the Dysprosium Fraction (Spektry pozitro-
nov disproziyevoy fraktsii)

PERIODICAL:

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958
Vol. 22, Nr 2, pp. 208-210 (USSR)

ABSTRACT:

The mentioned dysprosium fraction was here obtained by se-
paration from the tantalum target, which was irradiated by
protons with an energy of 660 MeV. In this connection it is
stated, that no data can be found in publications on the
dysprosium isotope with a half life of 20 hours. Dy¹⁵⁷ was
ascribed to the eighth period (reference 2). From reference 3
it can be seen, that another Dy¹⁵⁵ exists with a half life of
10 hours. In order to determine which isotopes are contained
in the here obtained preparation, its conversion spectrum was
investigated, which resulted in the determination of 11 peaks
of conversion electrons. 6 of these possessed the same half
life of 11 ± 2 hours. The energy of the electrons amounted to
 180 ± 10 , 270 ± 15 , 320 ± 20 , 400 ± 25 , 465 ± 30 and 610 ± 30
keV. It was assumed, that these are K-electrons, possessing

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Positron Spectra of the Dysprosium Fraction

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the transition energies 230, 320, 370, 450, 515, and 660 keV. Such transitions "apparently" correspond to Dy^{155} or Dy^{157} . The ratio of the number of positrons and of the number of conversion electron transitions with $h\nu = 515$ keV was established to be 37.5. A half life of 4.7 days and energies of 98, 112, 132 and 162 keV here corresponded to the four groups of conversion electrons. A comparison with the conversion spectrum of the dysprosium fraction as given in reference 3 permits to assume, that in this case it is concerned with the lines K-148, K-162, K-182 and K-210, which occur in the decay of Tb^{155} (the first three of them), which also pertains to the decay of Dy^{155} and Dy^{157} . Concerning the 20 hours decay period which was found in this investigation in the dysprosium fraction, it is stated here, that its origin remained unclear. Concerning this it is remarked, that in the measurements of the terbium fraction on a ketron (reference 4) positrons from a decay with a half life of 18 hours and a limit energy of ~ 2800 keV were observed, which is near to the found half life of ~ 20 hours. For this reason it is assumed, that the respective positron spectrum refers to the isotope Tb with a half life of 18 hours. There are 4 figures and 4 references, 3 of which are Soviet.

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Positron Spectra of the Dysprosium Fraction

48-22-2-14/17

ASSOCIATION: Fizicheskiy institut Leningradskogo gos. universiteta im.
A. A. Zhdanova (Physics Institute, Leningrad University named
A. A. Zhdanov)

AVAILABLE: Library of Congress

1. Dysprosium fraction-Positron spectra
2. Proton irradiation-
Application

Card 3/3

YUSHKEVICH, G.F., otv. za vypusk; GRIGOR'YEV, Ye.P., red.; BREDIKHIN, A.M., kontrol'nyy red.

[Instruments based on the application of radioisotopes and radiation; catalog] Pribory, osnovannye na primenenii radioaktivnykh izotopov i izlucheni; katalog. Moskva, 1959. 31 p. (MIRA 12:11)

1. Mezhdunarodnaya peredvizhnaya vystavka priborov i sredstv izmereniya, primenyayemykh pri issledovaniyakh v sel'skokhozyaystvennykh nauchnykh uchrezhdeniyakh.
(Radioisotopes--Industrial applications) (Instruments)

L-27050-66 EWT(M)

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SOURCE CODE: UR/0120/66/000/001/0118/0199

AUTHOR: Parayevskaya, N. V.; Sosnin, L. D.; Vashkevich, G. F.

ORG: Belorussian State University, (Belorusskiy gosudarstvennyy universitet)

TITLE: Optimal spectrometric regime of a photomultiplier with venetian-blind dynode system

SOURCE: Priory i tekhnika eksperimenta, no. 1, 1966, 198-199

TOPIC TAGS: spectrometry, photomultiplier tube, Gamma spectrometer, scintillation spectrometer, voltage divider

ABSTRACT: The authors investigated the spectrometric properties and operating conditions of the photomultipliers FEU-13, -44, -52, and -56, with an aim at checking whether the rated supply voltages in the printed specifications for these multipliers are correct. To this end, they measured the dependence of the amplitude of the output signal and the amplitude response of a scintillation pickup on the voltage between the photocathode and anode for different total photomultiplier voltages. The results of the tests for spectrometers with NaI(Tl) crystals used in the tests measured with the FEU-13 and -44, and with the FEU-52 and -56. The γ -ray source was ^{60}Co . The signal was measured with AL-1XC and AMA-4S pulse-height analyzers. It was shown that the rated voltages do not agree with the results of the tests. The use of a voltage divider to obtain the optimal operating conditions is recommended, and the values of

UDC: 621.383.292

L-27056-66

ACC NR: AR6007839

the requirements required for the various military items are given. Orig. art. was:
11/1/55

SUB CODE: 20, 09/15/ SUBM DATE: 09Jan65/ ORIG REF: 002

L 08077-67 EWP(o)/EWT(m) DS/QG/WH

ACC NR: AP6034215

SOURCE CODE: UR/0368/66/003/004/0486/0488

AUTHOR: Yushkevich, G. F.; Soshina, N. V.

ORG: none

TITLE: Investigation of the effect of neutron and gamma irradiation on the optical density of glasses used in some photomultipliers

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 4, 1966, 486-488

TOPIC TAGS: photomultiplier, gamma irradiation, neutron irradiation, irradiation effect

ABSTRACT: An investigation was made of the effect of gamma and neutron irradiation on the optical density of glasses used for FEU-13, FEU-14, FEU-52, and FEU-56 photomultipliers. Photocathode glasses 40 and 70 mm in diameter and 1 and 2 mm thick, respectively, were used as specimens. Gamma irradiation was conducted in cobalt installations with dose rates of 100 and 1 r/sec. Neutron irradiation was conducted in the vertical channel of an IRT-2000 reactor with integral fluxes of 10^{10} , 10^{12} , 10^{14} , and 10^{16} neutrons/cm². A gamma-irradiation dose of the order of 5×10^4 r at an average quantum energy of 1.25 Mev increased the optical density of glasses approximately 1.05 times. Gamma doses of 10^7 r and higher brought about greater changes. Neutron irradiation also darkened the glasses, although the darkening was uneven. The darkening can be linked to the appearance of F-color

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